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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2113



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INCREASED NEED FOR METAL RECYCLING DISCUSSED

Prague HOSPODARSKE NOVINY in Czech 9 Jan 81 pp 8-9

[Article by Engr Vladimir Chvatal, Dobra Research Institute of Ferrous Metallurgy-Prague Division: "Metal Within Reach. The Potential of the Domestic Raw Material Base"]

[Text] Of the multitude of ties linking our developed economy to the international division of labor, some of the most important are those through which we obtain the most fundamental materials for all production activities--iron and steel. The importation of these materials, in many forms, has already represented for many decades a basic and unchallenged priority component of our trade balance, the significance of which strongly underlines the whole structure of our industry.

Sharp changes in recent years in the stable price and supplier-consumer relations in world trade, the rapidly rising investment intensiveness of the development of new ore deposits, the supplying capabilities of our partners, along with other circumstances, could not fail to exert an influence on the conditions under which we obtain the necessary quantities of ferrous substances. There have been intimations on their part which rule out the possibility of counting on regular import increases in the future. A situation has arisen in which not only words, exhortations, and well-intentioned resolutions, but also immediate reality, expressed in terms of sharply curtailed sources, are forcing a turn to consistently intensive management, the components of which are, on the one hand, a much more efficient and economical valuation of metals, and on the other hand a focusing of attention on as yet insufficiently utilized domestic resources.

At this time the highest party and state organs are directing the attention of all elements of the national economy in both of these basic directions, and at a number of measures derived from them. Changes in the management system in effect since the beginning of last year will undoubtedly aid their implementation in many respects; in addition to this, however, particularly intensive attention must be paid to achieving maximum efficiency in metals utilization. This article especially will call attention to several important possibilities for obtaining ferrous substances from domestic resources. These possibilities stem from considerations, research, and calculations of the effectiveness of potential supplies which have so far been utilized incompletely or not at all, the exploitation of which is becoming, right now, highly promising.

Projections of world steel output made 8 years ago in the United States predicted that 940 million tons of steel would be produced in 1980. Projections developed in Great Britain predicted steel output in excess of 1.2 billion tons in 1985. Figures on current world steel production indicate, however, that last year only about 700 million tons were produced. In light of this, the original volume projections for future years will have to be significantly modified in a downward direction.

Other data concern the structure of charges for steel production expected for around the year 2000. It is expected that at this time 7.5 percent of all steel will be produced from prerduced ores, 40 percent from processor and consumer waste, 12.5 percent from production waste, and about 40 percent from pig iron. This represents great changes from the present situation.

#### Interest Focused on Secondary Raw Materials

Czechoslovak considerations regarding steel production have recently also been reduced from the prognoses of the 1975-1976 period. Some of the reasons for this reduction in steel production are the same for the CSSR as on the world scale. First among these are the limitation of, and sharp price increase in, energy resources, improved management of steel (weight reductions in machinery and equipment, and the production of steels with higher mechanical values). A further reason is the development of synthetic materials, often with high parameters. The more rapid increase in the prices of primary raw materials in comparison with finished products has played a by no means insignificant role. A reduction in investment projects resulting from critical phenomena, and consequent limits on steel consumption in the capitalist states, and, finally, more effective corrosion protection, have all influenced steel production.

From 1970 to 1973 great hopes were placed worldwide in the increase of metallic substances through direct ore reduction. These hopes have turned out now to be significantly more modest due to the sharp increase in prices of the necessary energy; the existing technology is concentrated in areas where the needed energy resources are predominantly local.

All of these reasons are leading to research on the potential for the maximum utilization of secondary raw materials, above all waste products of all kinds which contain metal in whatever form. The utilization of metals from the wastes generated during metallurgical production itself in factories processing metallurgical products, or metals which have already been used, is especially important. To be specific, such utilization contributes not only to the conservation of primary resources--ores--but also lowers energy requirements significantly. For instance, the production of steel from wastes consumes only about 40 percent of the energy required for production from ore in a blast furnace or through direct reduction. The savings are still greater in the production of nonferrous metals. Savings exceed 50 to 70 percent and are greatest for aluminum, where the melting of wastes requires only about 5 percent of the energy which must be expended to produce aluminum from its primary raw material, bauxite.

At present, 61 percent of the steel produced in the CSSR comes from charges of pig iron and alloying additives, the remainder from scrap. The principal raw



materials base for pig iron production are ores imported from the USSR, which provide for 79.1 percent of total production. We purchase enough ore from capitalist and developing countries to cover 15.5 percent of pig iron production, while domestic ores cover 5.4 percent of production. The Soviet Union does not have unlimited potential, however, and therefore we may not count on additional increases of imports from its resources. Even the assurance of the current level of orders requires credits on our part in the form of deliveries of equipment, often purchased in capitalist countries, for new mining locations. At the same time, we may not count in the future on the current imports of 1 million tons of pig iron from the USSR (realized in addition to imports of iron ore). These deliveries will gradually cease completely. Importing ore from capitalist and developing countries is, to be sure, theoretically possible, but unrealistic due to the huge foreign currency demands. Therefore, it is essential to seek ways of reducing the amounts currently imported. There are ways, and they are not being neglected. Potential sources of ferrous substances which could be obtained in a relatively short time, and the exploitation of which would be economically feasible, currently appear to be:

1. greater utilization and processing of consumer ferrous waste;
2. a maximum reduction in nonrecoverable losses of ferrous substances such as slag, dust, ashes, sludge, hearth accretions, scale, and the like during metallurgical production,
3. the utilization of iron from metallurgical dumps, slag heaps, dust, ashes, sludge, accretions, scale, and the like,
4. the utilization of the ferrous substances in domestic, nontraditional raw materials and waste products, among them:
  - a. metal wastes in solid communal wastes (trash cans, containers, and household rubbish);
  - b. wastes of ore processing plants;
  - c. magnetized iron from power plant flue ashes.

The above listing of possible sources of ferrous wastes does not exhaust all the potential sources of ferrous substances in the national economy. I could name still others, for instance dumps and the incidence of ferrous residue at the Sered Nickel Metallurgical Plant after the extraction of the nickel, the wastes of pickling plants and chemical factories, etc. The technology involved in processing them, however, will still require large investment outlays or the undertaking of still more difficult research work.

#### Ferrous Wastes--Reality and Potential

In terms of potential, scrap iron is one of the most important sources of the conservation of metal substances. Its individual types may be characterized primarily according to the location in which they are generated. It is, on the one hand, a waste product of production, resulting directly from metallurgical production, in steel factories, rolling mills, forging plants, and foundries, and on the other hand; a byproduct of processing, resulting from the processing of metallurgical products in the machine building industry and other sectors. Finally,

it is a consumer waste product, also called an amortizational product, made up of discarded objects, machinery, capital goods, discarded railroad tracks, and also products for home use which have worn out, as well as used-up metal containers. (cans, jars, etc).

Nevertheless, in the future some of these sources will become less productive. For instance, the development of progressive metallurgical production technology—smooth casting, processing plant modernization, and the like—will result in a relative decline in the occurrence of production related waste. In the processing sectors as well, innovational intentions are directed, among other projects, at the conservation of metals through the building of lighter machinery, more precise production tolerances, the use of shapes fostering conservation, and the like.

The amount of amortizational waste will increase because the metals supply of the country will continue to increase, and amortizational waste makes up a certain percentage of waste metals, even if its turnover period were to be shortened. It is in the interest of the national economy, however, that the turnover time for the metals supply speed up, as Lubomir Strougal, chairman of the CSSR Government, stated at the 18th Session of the CPCZ Central Committee. At present, the average life span of equipment composed primarily of iron (i.e., not only machinery) is 25 years. This period is twice as long as, for instance, in the United States. In the countries of the European Economic Community, this turnover period is 13 to 17 years. This is manifested, obviously, not only in the amount of obtainable amortizational wastes, but also exerts a positive influence on the modernation of the stock of production machine tools.

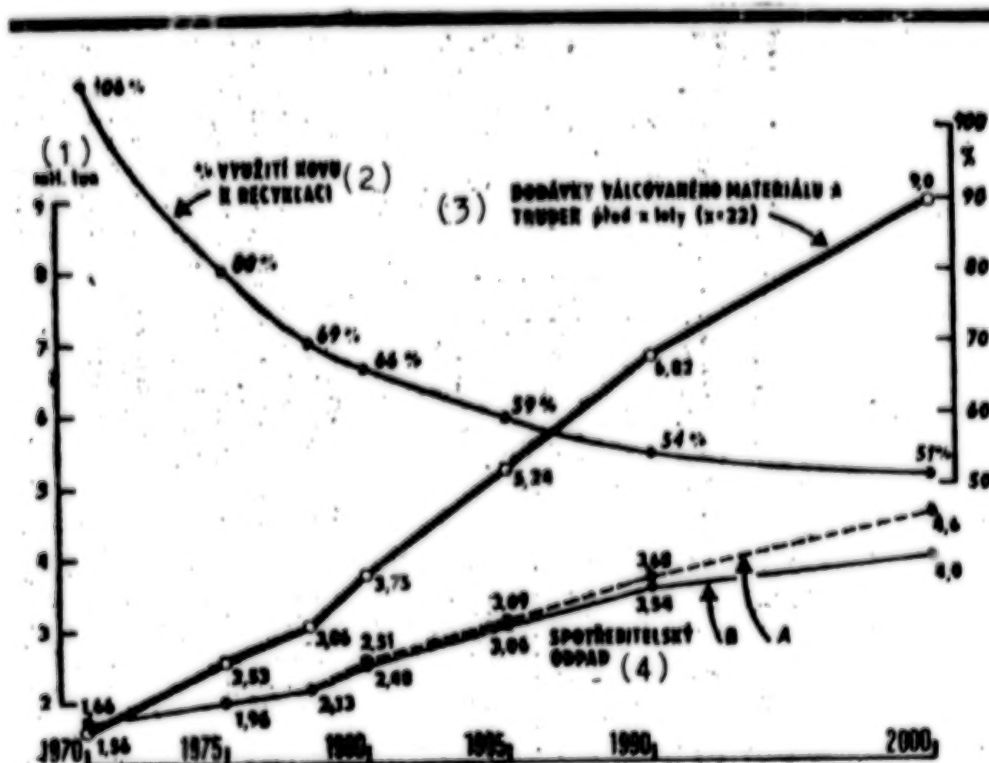
A question may arise as to why the turnover period of the metals stock has not shortened in our country, but has been lengthening recently. I think that the main reason is that most of the construction here is devoted to large capital projects, facilities, communications projects, bridges, and the like, which have a long useful life and are not recoverable even in the course of a single generation. Moreover, the large machine tool stock in our factories is used for one shift and sometimes for less, and often therefore exists as excess capacity. Wear and tear is therefore minimal, but its efficiency is low due to obsolescence. This, on the one hand, negatively influences possibilities for increasing labor productivity by modernizing equipment, and on the other hand results in a low recoverability of consumer wastes. In order to predict metallurgical production, it was necessary to establish possible sources of ferrous wastes, which are crucial for the volume of steel production, given the assumption that neither ore supplies from the USSR nor domestic sources will increase. The calculation of iron waste in production was arrived at by differentiating the steel and relevant surplus metal of metallurgical products. The calculation of processing waste was arrived at by utilizing the metallurgical materials delivered to processors, adjusted to an extent justified by improved metals utilization and with a view to their consumption abroad. The most difficult figure to establish is the amount of consumer waste. A methodology was used which has been approved within the CEMA and which is based on the renewal of the metals stock of a country and its turnovers. Increases include only iron from pure oxides, excess of imports over exports of pig iron, metallurgical and machinery industry products. Unrecoverable losses, corrosion, and abrasion losses are deducted. (The methodology employed by the Economic Commission for Europe is based on domestic deliveries of metallurgical products x years previously and unrecoverable losses from these deliveries.)



The following diagram displays values calculated according to both methods, for purposes of illustration and comparison. The classification of produced steel reflects projections of a gradual 30 percent reduction in net exports of pipe and rolled materials by the year 2000.

The values calculated for 1980 and 1990 are almost identical. For the year 2000, calculations using the Economic Commission for Europe method yield larger volumes than calculations based on the metals stock. These calculations likewise show that presently in our national economy about 400,000 tons of iron represent yearly unrecoverable losses, over and above necessary losses such as iron to reinforce concrete, pipes buried in the ground, corrosion losses and the like, which themselves account for more than 2 million tons of steel products.

Diagram 1. Expected Amount of Consumer Iron Waste, Given Deliveries of Rolled Materials and Pipe x Years Previously. Calculations According to: a) Metals Stock Turnover (kF) - CEMA; b) Recycling of Metallurgical Products - Economic Commission for Europe.



Key:

1. million tons
2. Percentage metal utilization
3. Deliveries of rolled materials and pipe x years previously (x = 22)
4. Consumer waste

The percentage of metal utilization in recycling curve for deliveries of rolled materials and pipe 22 years previously shows a declining tendency for the 1970 to 1980 period. Extending this curve to the years 1985, 1990, and 2000 would represent a decline in metals utilization to 50 percent. These considerations are the basis for calculations of probable sources of waste iron in future years. An objective of national economic management, however, must be the prevention of a further decline in the utilization of metallic waste. Several potential ways are mentioned in this article.

#### Millions in Value at the Dump

There are a number of reasons for the unsatisfactory recoverability of used up steel products. For instance, we produce more than 100,000 tons of tin-plated cans per year, mainly for the packaging industry for canned foods, drinks, bottle caps, and the like. Of this amount, only a little more than 20,000 tons per year returns for detinning after use, and most of this is from production rejects and production waste. We have not, however, shown ourselves capable of organizing the collection of used containers. These are lost in household waste, which we do not as a rule make further use of, and which ends up in the forests or in uncontrolled landfills where it harms the environment. At the same time, however, those 20,000 tons of waste already yield, when reprocessed, 120 tons of pure tin, valued at almost Kcs 14 million, and 20,000 tons of pure steel waste, valued at Kcs 20 million. The purchase price of tin obtained abroad amounts to more than Kcs 30 million. Thus, if an additional 30,000 tons of this waste could be obtained, this would contribute an additional Kcs 75 million to the national economy. The situation is similar with other household metal waste.

We also make insufficient use of amortizational waste in socialist organizations. Lots of discarded equipment is sitting in warehouses where it is becoming useless due to rust. The worst situations arise in the liquidation of large facilities and complexes which are used-up economically or have ceased to operate. In such instances, liquidation takes years. While the main reasons for this are insufficient incentives and obsolete legal standards, there are other causes as well.

Nor is the situation in the processing of steel shavings much better. In the past, despite the lack of briquetting presses, all the shavings were processed. Experts point out that most of them were processed in the blast furnaces, which the current system of charging and dust removal does not permit. But even so, the current excess 100,000 tons of steel shavings should not have to be exported, as it would be possible, given good organization, to process it domestically. Keep in mind that this represents 0.6 percent of steelmaking charges.

It is obvious that consumer wastes, which will have a tendency to increase in the future, are qualitatively inferior to production waste, both in terms of size and chemical composition. Processing it is therefore more difficult technologically, and even requires new processing equipment.

The implementation of all these projected programs will not, however, be sufficient to reduce imports from capitalist and developing countries or to replace pig iron imports from the USSR. This conclusion will remain true even if there is a decline in the rate of growth of steel output. It is therefore essential to focus efforts on obtaining ferrous substances from additional sources.

## The Contribution of Metallurgical Production: Minimizing Losses

In the course of metallurgical production, ferrous substances are lost to slag, ashes, sludge, and dust. A certain amount of such losses are unavoidable and inherent in a technical procedure dominated by the oxidation of introduced elements. A detailed description of metallurgical production technology from the blast furnace through the steel mill to the rolling mill is not the subject of this article. It is, however, well known that a great increase in performance results also in greater losses of metal. For this reason the research agenda of the Seventh Five-Year Plan includes the search for ways to reduce significantly these losses of metal. We are assuming that these efforts will yield a saving of 50,000 tons of iron.

It is known that the high price of land in capitalist countries, laws concerning the preservation of the environment, and economic conditions lead the major world metallurgical factories towards so-called wasteless production, that is to the concurrent processing of all metallurgical wastes. Among the principal byproducts of metallurgical production is steel slag. This is, however, also a valuable raw material because of its iron content in metallic and oxidized form, and because of its content of free lime. About 2 million tons of slag is produced yearly by our metallurgical industry, of which about 0.8 million tons is used in the blast furnace charging process, and comes from that year's output, and about 0.6 million tons is extracted from old dumps. To increase the sources of ferrous substances it is necessary to prepare for the processing of steel slag from additional locations. Recommended slag processing consists of breaking it down in such a way as to separate the accretions suitable as direct charges for steel mills, concentrates for use as blast furnace charges, and byproducts for agriculture--it is a source of lime, phosphorus, and magnesium--and for construction. The accretions are about 90 percent iron, the concentrate about 40 to 45 percent iron, 3 percent manganese, 38 percent lime, 8 percent magnesium oxide, less than 1.8 percent phosphorus pentoxide, and less than 14 percent silica. The application of dump and slag heap processing at the Trinec Great October Socialist Revolution Ironworks, in Vitkovice, at the Poldi United Steelworks, national enterprise, and at the East Slovakian Ironworks suggests a potential for increasing sources of ferrous substances by more than 140,000 tons per year. Regarding metal-bearing ash and sludge, these arise during metallurgical production through the breaking off of tiny particles either from the raw material inputs or from semifinished products resulting from the course of the metallurgical processes and which are caught in separating devices; they also include minute sludge particles from the reheating and processing of steel and other metallurgical products and sludge from water treatment plants. The iron content of these substances, in their unprocessed state, varies widely and fluctuates typically between 40 and 65 percent. Steel mill ash and sludge also contains from 4 to 7 percent zinc, sometimes more, and 1 to 2 percent lead.

At present more than 330,000 tons of these substances are generated each year with a content of more than 180,000 tons of iron. In future years this should be more than 400,000 tons per year and about 220,000 tons of iron. And these data do not include those amounts which are already being utilized in some metallurgical plants.

A technology proposed by the Institute for Ores Research, and which has been introduced and verified in several capitalist countries, is based on the reduction of these raw materials in rotation furnaces which enable the capture of the liquid metals such as zinc, lead, and cadmium. The processing produces prereduction

pellets with an iron content which depends on the processing of the input raw materials and which averages about 78 percent. In addition, the use of this technique permits the extraction of 24,000 tons of a zinc-lead concentrate made up of 34 percent zinc and 8 percent lead.

An investment plan has been developed for the construction of a facility with a capacity of 120,000 tons of iron, but due to a lack of investment resources there is no hope of beginning construction during the Seventh Five-Year Plan. Processing of the remaining 100,000 tons has not as yet been technically resolved.

#### To Extract From Nontraditional Sources as Well

In the case of losses of metals contained in household waste, I mentioned the losses of used cans which are for the most part of tinned steel. There are, however, other metals contained in household waste. Iron objects, light-current equipment, and unneeded objects of daily consumption all find their way into these wastes. Practical tests and analyses have shown that in Prague alone there are unrecoverable losses of 30,000 tons of metals, of which a significant percentage are nonferrous metals in short supply.

The Research Institute for Local Management in Prague decided to concern itself with the solution to this issue in the upcoming five-year plan, and developed an introductory study aimed at a solution, but has not as yet found the requisite understanding among its supervisory agencies. At the same time, the goal of this solution was to find a simple method for magnetic separation and the selection of nonferrous metals which could be implemented, with small investment outlays, in the large cities before outfitting them with incinerators or composting plants.

If we extrapolate our calculation of metals losses in Prague to the whole country, then we are losing yearly 150,000 to 200,000 tons of metal wastes.

The wastes of ore processing plants represent another nontraditional source.

The settling basin at the Spišsko-Gemersky Ore Mountain Processing Plant contains, after the processing of spathic iron ore, wastes containing 21 to 23 percent iron, part of which could be easily extracted by the application of a relatively simple processing operation. The Rudnany processing plant now has about 4 million tons of supplies which are growing by 400,000 tons a year. The Rožnava processing plant has 1.3 million tons of supplies, and has a yearly growth of 54,000 tons.

The proposed technique would consist of removing the wastes from the settling basin by means of a power shovel, modifying their density, checking and classifying them, followed by four-step or five-step separation, and the removal of the magnetic components. The presumed composition of the processed concentrate would be, approximately, 38 percent iron, 1.5 percent manganese, 8.2 percent silica, and lesser percentages of other compounds which do not harm the metallurgical process. The expected costs for this processing are very favorable, since the material has already been mined and has a favorable consistency. And since the wastes are spathic, processing for a blast furnace charge leads to agglomeration--to the further enrichment to about a 55 percent iron content. About 90,000 tons of iron a year could be obtained in this manner.



Research is also hunting for additional possibilities for obtaining ferrous substances. One such method which appears promising is the utilization of power plant ash. In this article it is possible to mention only the identified sources, the technological means, the amount of iron contained in this source and expected growth rates, and the total ash involved.

As of 1980, there was almost 140 million tons of ash matter in dumps. Given a yearly increase of more than 23 million tons, these dumps will reach 550 million tons between 1980 and 1990, according to the calculations of the General Directorate of the Czechoslovak Power Plants, national enterprise. Such a situation would be exceedingly unfavorable from an ecological viewpoint, and at the same time would mean the destruction of a great amount of valuable raw materials.

Iron is present in ash in a number of compounds, of which only the magnetic oxides are significant in terms of iron extraction, because they may be separated magnetically. Iron concentrates are qualitatively comparable to very high quality ores. For this purpose, however, ash from grate furnaces is unsuitable, while on the other hand ash from granulation furnaces is highly suitable. Iron content fluctuates between 4 and 5 percent, and in individual cases may exceed 10 percent. The weighted average of the magnetic iron content is 3.1 percent. This percentage content applied to the predicted incidence of ash results in the following supplies of iron: 1980, 4 million tons; 1985, 7 million tons; 1990, 10 million tons; 2000, 17 million tons. Power plant ash must be viewed as a valuable raw material, based on research work conducted abroad in the USSR, the GDR, the People's Republic of Poland, and the United States. Work has progressed the farthest in the GDR and the People's Republic of Poland, where the extraction of iron concentrate has been initiated on an industrial scale. In the CSSR, the College of Chemical Technology in Prague and the Institute for Inorganic Raw Materials in Kutna Hora are studying this issue.

Of the yearly increase in ash, flue ash, and slag--20 to 23 million tons--about half is capable of being separated magnetically. This represents a yearly total of more than 300,000 tons of magnetized iron. The composition of extractable concentrate approaches that of Swedish ores.

Given the extraction of about 400,000 tons yearly from common sources and from dumps, it would be possible to count on costs of about 70 percent of the price of ore imported from the USSR. At the same time, nevertheless, it would be desirable to process an amount of ash, such that it could be used elsewhere after the extraction of the iron. The possibilities for further valuation of this resource will be determined by the above-mentioned Institute for Inorganic Raw Materials in Kutna Hora.

#### Overall Possibilities for Obtaining Supplementary Ferrous Substances

Thus, if we study the possibilities for obtaining ferrous substances from non-traditional, secondary raw materials by approximately 1990, we must taken into consideration a number of circumstances. However, if we assume intensified research and the practical application of solutions produced by this research, we have concluded that it is feasible to obtain approximately the following amounts (in thousands of tons per year):

- by reducing unrecoverable losses in metallurgical production	50;
- by improved utilization of steel mill shavings	140;
- by using metallurgical ash and sludge	220;
- by obtaining iron from solid household waste	80;
- by using wastes of ore processing plants	90;
- by utilizing power plant ash	<u>400</u>
Total	980

This is an amount that could replace 56 percent of the ore currently imported from the capitalist countries. The intensified collection of iron waste could contribute an additional 400,000 tons. This means that given not too high an increase in steel production before 1990 we could replace almost 80 percent of the current ore imports from nonsocialist countries. Given the current applicable import prices, this amounts to almost Kes 900 million in all-charges-paid prices. Clearly it is worth taking all the necessary steps to utilize resources which can have such an effect on our economy.

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ASPECTS OF HOUSING RENOVATION PROGRAM DISCUSSED

East Berlin TG TECHNISCHE GEMEINSCHAFT in German Vol 29 No 2, Feb 81. signed to press 29 Dec 80 pp 13-16

[Article by Dr Horst Vysek, chairman, Central Office for Standardization (ZFS), Interior Work and Construction Repair: "Old Houses Have a Future"]

[Text] But first of all they have a past, because more than one-third of the dwellings in the GDR territory is at least 80 years old. That is really all there is to say about a dwelling quality. For the tenement houses from the heyday of capitalism and the early years of imperialism were intended to be places to sleep, not live. We have also been handed down a rich inheritance of medieval city building. People in the building trade are confronted with extremely complicated problems in modernizing it. Yet they are rising to the task. Living in modernized old buildings should satisfy the requirements for socialist living conditions. Technical units of the Chamber of Technology are seeking solutions which will permit us to achieve this goal more efficiently, thus cheaper and faster. They encounter contradictions whose solutions they place on the agenda. For dwelling is a social problem. Thus, giving old houses a future must also be a general economic concern.

In his important speech at the seventh conference on construction Comrade Erich Honecker stressed the following: "Construction in our country satisfies essential needs of the people. It is involved in increasing output, which is essential in order to successfully continue our peace policy, our overall social policy."

The special efforts of the approximately 800,000 people in construction in the GDR in the period between 1981 and 1985 will be directed at increased utilization of the capacities of the construction industry to strengthen the material-technical base of our economy. With the further realization of the housing construction program, which in the future must also be viewed as a key element in the sociopolitical program, in the next 5 years 930,000-950,000 dwellings, involving 600,000 new housing units and the common facilities, will be created by new construction and modernization. That should provide good living conditions for an additional 2.8 million citizens.

The urgent need to modernize approximately 350,000 dwellings stems purely from the fact that in the GDR there are M450 billion in construction funds, including M170 billion for residential buildings. One third of these dwellings came into being prior to 1900, one-third between 1900 and 1945, and another third after 1945. One-third of our dwellings is thus at least 80 years old, but another third is 35 to 80 years old.

A decisive role in the age of a building is played by the kind of construction in the large cities between 1890 and 1913. In these dwellings there are in part neither baths nor indoor toilets, so that modernizing them is quite costly. Only 55 percent of the dwellings are currently equipped with baths or showers and with indoor toilets. By 1990 we want to reach the level at which about 90 percent have such equipment. One possibility for this is to install prefabricated bathrooms, which they are doing in Berlin-Koepenick.

From the point of view of building condition, roughly 2 million dwellings are well preserved, but houses with 4 millions dwelling units reveal modest damage. Thus, it is not surprising that the focal point of the tasks of the Building Industry VEB and of economic mass initiative lies in the rapid removal of small defects.

Modernization involves removing moral wear and tear on the structure in combination with repair. The problem is to view and deal with the modernization of the building, the housing complex and the housing region as a unit. It is a matter of improving the infrastructure and raising living conditions to a qualitatively higher level, not only in respect to the dwelling, but at the same time in respect to all social functions.

In spite of the rapidly increasing demands on building maintenance and modernization, at present only about 5 percent of the apartment buildings are being replaced with industrial methods. This share must rise to 30 percent by 1985, primarily in the roof and facade product lines.

#### Utility Value as a Criterion

Focusing on modernization is accompanied by the concern to make our dwellings safe, warm and dry, and also by the demands of the energy economy. Thus, in three- and four-story apartment houses, but also in single-family dwellings, heat losses are as follows: from external walls 25-36 percent, ceilings under the roof 18-22 percent, floors 10-22 percent of the total heat loss.

The causes of these high heat losses in old buildings can be primarily attributed to the extent to which the foundation work is subjected to moisture, to the poor condition of the outside stuccoing and to the lack of storm windows in 40 to 45 percent of all old buildings.

In addition to the pressing need to repair and modernize dwellings, in respect to new construction there are also economic advantages in modernizing. With site development a new dwelling always costs around M60,000, while in developing what exists in the old building sector the cost of modernization at present is between M20,000 and 30,000 and can be reduced to about M15,000.

On the other hand, kreis-administered construction, even with the use of the most modern technology, can scarcely achieve more than half the work production as compared with the housing construction combines. But nowhere does there exist the possibility of reducing construction costs as much as in the modernization and repair of old buildings, specifically because with efficient planning and implementation it would be possible to reuse a number of structural units, such as doors, floors, windows, and other things.

Examples from 1978 and 1979, as in the case of the Berlin-Lichtenberg Construction Repair VEB, have shown, however, that with cost reductions amounting to millions difficulties occur in fulfilling the indexes for construction production and enterprise output. Thus, it is not surprising that enterprises in kreis-administered construction prefer to utilize their capacities in places other than just in the repair of living space. This contradiction in the use of economic levers can only be solved by an orientation toward fulfilling utilities values, thus toward the modernized dwelling.

#### Nondestructive Test Methods

Because of its special position as an element of construction which affects existing construction, testing and evaluation of existing construction plays a decisive role for precision in designs and in the correct choice of technique and technology. Therefore, the construction industry needs methods for nondestructive testing of the structure.

This has to do with examining footings and foundations in respect to their stability, and examining and testing all steel concrete construction for strength, corrosion of the steel components and for preservation possibilities. This also affects steel construction and combined construction from the same point of view, and not least the entire sector of technical building equipment. As a rule, with testing and evaluation there simultaneously develops the task of finding methods to get rid of the damages caused by moisture, attacks by chemical action and from use, without having to replace the corresponding elements.

The task is broader because preservation methods must be developed for all types of and elements in building construction. In this, we are addressing machine building, vehicle construction, shipbuilding, and so forth, in respect to their experiences to date, and also the chemical industry, the electronics industry and others which are devoted to developing such methods and means on the basis of their specific technical requirements.

The effort to do this is worthwhile because the useful life of old construction that has been modernized is extended by 25 to 30 years. Thus, old houses do still have a future.

#### Activities of Technical Units

In the Central Technical Section for Interior Work and Construction Repair nine technical committees, occasionally with a larger number of technical intercommittees or subcommittees, are at work in the bezirks:

TC [technical committee] for design,

TC for construction cost planning and price formation,

TC for wood preservation in building construction,

TC for building drainage,

TC for self-help,

TC for local space heating,

TC for paint and surface design,

TC for floors,

TC for roof coverings.

Since the Central Technical Section cannot rely on a single larger combine, its units and technical committees depend on cooperation with the many enterprises. This kind of cooperation results in the fact that even in a variety of enterprises and facilities the results of our work can be put into practice. The TC for construction cost planning and price formation, for example, is directly involved in price development by the Ministry for Construction, the TC for design works directly with the product group association for construction repairs and modernization, the TC for wood preservation has its immediate backup in the Institute for Forestry in Eberswalde, and our TC for building drainage works directly with the enterprise of the product groups for construction repairs, which is responsible for product and method, the Construction and Reconstruction Combine VEB in Leipzig.

Cooperative and private artisan work has an enormous share in maintenance and modernization efforts. In the Chamber of Technology the work of the TC's is also directed at this special issue; thus, focal points in the exchange of experience about scientific-technical development are, for example, the TC for paint and surface design for the painters guild, the TC for local space heating for the stove fitters guild and the TC for roof coverings for the roofers guild. This work, among other things, is expressed in the fact that almost all standards in these areas were and are developed or decisively influenced by staff employees of the TC's or subcommittees of our Central Technical Section.

Extremely important for economic mass initiative is the TC for self-help which, in close cooperation with the Building Management VEB, is developing practical tips for the self-helper.

In honor of the 10th Party Congress the Central Technical Section is assuming the following obligations, among others:

--Developing a brochure entitled "Building Drainage;" it includes building waterproofing and the introduction of a new measuring method to determine moisture in the masonry. Thus, it takes the energy economy into account since moisture in masonry constitutes a substantial share in the loss of thermal energy.

--From the point of view of the material economy the manual entitled "Wood Preservation, Basic Information for Experts in Primary and Secondary Protection" is being revised to reprint the third edition and a sheet of instructions for chemical wood protection is being developed for scaffold lumber with the goal of saving 20 percent of the material in that way. Moreover, in 1981 at least 250 practitioners and students, in cooperation with the Advanced Engineering School for Construction in Wismar and Cottbus, will be trained to be experts in primary and secondary protection.

--Our TC for local space heating is becoming the technical consultant for design enterprises in respect to the use of individual coal firing places in industrial residential construction.

--In addition to continuation of production-technical courses and technical meetings, the TC for paint and surface design is developing a Chamber of Technology guideline concerning the use of coats of paint in measures for maintaining structures.

--An experimental product in Naumburg concerning sanitary-technical modernization in self-help is being evaluated by the TC for self-help. The results of the evaluations will be made available for economic mass initiative.

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## PROSPECTS FOR SOLAR ENERGY USE EXAMINED

East Berlin BERLINER ZEITUNG in German 7-8 Feb 81 p 13

[Article by Dr Iwan Boschanakow: "Is Solar Energy of Interest to Us, Too? Solarization on the GDR Corresponds to the World Energy Need"]

[Text] Projects for utilizing solar energy exist everywhere in the world; we have often reported on them. But although many experts are aware of the reserves that are present in this form of energy, they leave no doubt that the future energy supply can no more be assured by solar energy alone than by other traditional energy producers, but only through increased use of nuclear power plants. Even so, attempts at (local) utilization of solar energy have a certain justification even in a sunshine-poor and highly developed industrial nation such as the GDR, as is shown in the following contribution.

An average of 900 kilowatt hours (kWh) of radiation energy annually fall on 1 square meter of ground surface in our country. In order to form a picture of that, it is necessary to imagine that for each square meter of ground an electric radiant heater with more than 500 watt capacity would have to operate in order to produce the same heat as the sun rays deliver. The total solar energy which falls on our territory thus corresponds to the annual energy requirement of the world! But what possibilities exist for practical utilization of this energy?

Of the 900 kWh solar radiation that falls on each square meter annually, 300 to 500 kWh could be transformed into hot water for the household by the use of solar collection facilities. This means that with 1 square meter of solar collector surface 24 to 40 marks annually could be saved for the household as compared with an electric hot water heater. For a 4-person household 6 to 8 square meters of collector surface and a 100 to 400 liter hot water storage tank would be necessary in order to meet 30 to 50 percent of the annual need for hot water. Solar hot water heating equipment consists of the collector, circulating pump, controller and storage tank. This kind of compact installation was already exhibited in 1978 at the Central Fair of the Masters of Tomorrow in Leipzig.

If there is no sunshine for a long time and the storage tank becomes emptied, the hot water heating must be taken over by a supplementary, often already present, conventional hot water heater (for example a gas-heated continuous-flow water heater or an electric hot water tank).



Solar collectors and installations are manufactured for example at the Light Metal Manufacturing VEB in Dessau and at the Delitzsch Pipe Works. It is not possible to heat with solar collectors in the winter. But with heat pumps and stored solar energy it is not only possible to heat in the winter, but also possible to save a considerable amount of energy. Since the environmental heat which is not directly used can only be brought up to a higher temperature (for example 45 to 60 degrees) with the aid of expensive electrical energy, the question of the availability of this energy is directly connected to the utilization of heat pumps.

An electric heat pump heating system is capable of producing about 3 kilowatts of heat out of 1 kilowatt of energy input. This results in a considerable saving of energy in comparison with direct electric heating (for example night storage furnace). If the energy expenditure of the auxiliary equipment is included, it is still possible to save about 50 percent of the power costs. The four experimental homes in the solar residential development in Moetzlich near Halle, as well as the single-family home in Woltersdorf near Berlin, show how direct and stored solar energy can be utilized with collectors and heat pumps. These houses have been in experimental operation since last winter (1979-80).

The insulation and heat pump heating in the solar houses in Moetzlich save about 30,000 kWh per house annually, and the solar collectors save about 7,500 kWh. These houses use four times less heat energy than conventional buildings of the same size. The input power for heating a solar house thus amounts to only about 4 Kw. The general importance of such tests comes from the fact that about 40 percent of the total energy demand of the GDR is for space heating and hot water heating.

Publications by the Leipzig Institute for Energetics show that the potential contribution, useful to the energy industry, of nonfossil and non-nuclear energy resources for the GDR will amount to about 1 percent of the primary energy demand in the year 2000. This percentage also includes utilization of wind energy (that is stored solar energy as well). However, only 0.25 percent are reported to have economic value.

Nevertheless, these low percentage figures must not allow a false picture to emerge concerning the importance of solar energy utilization in the GDR. In this connection consider the following: Let us stick to the 1-percent solar energy share of the primary energy supply in the year 2000. That means that in 2000 we must utilize about as much solar energy as we produce from nuclear energy today. Nuclear energy utilization has needed 40 years of intense research and development since its discovery in order to reach this stage of utilization. Hence, the 13-percent contribution of renewable energy resources set as a target by the 10th World Energy Conference for the year 2020, of which 5 percent are to be direct solar energy, is understandable. In comparison—the world's partial supply of primary energy from nuclear power for the year 2020 has been estimated to be 23 percent.

# STEADFAST VALIDATION OF PRICE POLICY DISCUSSED

Budapest PARTELET in Hungarian No 3, Mar 81 pp 26-30

[Article by Pal Vallus, first deputy chairman of the National Office of Materiel and Price Control: "Consistent Implementation of Our Price Policy"]

[Text] Realization of our economic policy objectives will be influenced significantly by how the new price system and price mechanism that were introduced last year will function in practice. This year, therefore, the two principal tasks of our price policy are as follows:

1. Consolidation of the new price system and price mechanism created in 1979-1980, and within this the consistent application of pricing in line with the foreign-trade prices, and the expansion of the scope of such pricing. This will be the first year in which the new pricing principles can assert themselves fully, free of initial uncertainties and subsequent corrections. Consistent application of the pricing principles must now decidedly enhance the product structure's transformation, more-economical management and, in general, a rise in the effectiveness of productive work.
2. Ensuring the harmony of the consumer prices and producer prices, within the rise of the consumer price level specified by our policy on the standard of living. Our national economic plans call for stabilizing the already attained standard of living. At an approximately 5-percent rise of wages and personal incomes, this will mean a rise of 4.5 to 5 percent in the consumer price level.

Producer-price policy anticipates that both our foreign trade and production will become more effective. Actually we will have to alter our product structure at a suitable rate and produce products that are better and more modern; furthermore, our enterprises and cooperatives will have to adjust more flexibly to market demands, supply at shorter lead times products that are more uniform in quality, and improve their marketing; in the end they will be able to achieve on the foreign markets prices that are more favorable than at present. Primarily this improvement of effectiveness can ensure that domestic price ratios will approximate the international value ratios, without letting the price level's rise jeopardize the realization of the objectives of our policy on the standard of living.

Maintenance of our standard of living, then, requires better work, in both production and trade. The fact is that our price system provides an unprecedented incentive to operate more effectively, and we may now say that it also compels such operation. Many enterprise managers, however, do not fully understand this compulsory effect and regard it as too drastic. They overlook the fact that today no country in the world is able to maintain or develop its productive forces and its levels of output and consumption, without improving its effectiveness.

Amidst the conditions of international inflation, the price rise targeted for the Hungarian economy is on a relatively modest scale. This has been made possible primarily by the fact that price policy is integrated more and more closely with the more effective and consistent system of managing the economy. The restrictions, begun in recent years, on the outflow of domestic purchasing power, and economic policy's continued emphasis also in the coming years on avoiding excessive demand--primarily on the investment market--will likewise provide a favorable starting point for price policy.

From the viewpoint of the new price mechanism's ability to function it is of exceptional significance that we consolidate the balance of purchasing power and market allocations on the domestic market, that we promote sound economic competition, and that the system of financial regulation, and particularly of income regulation, be sufficiently binding. In other words, this system must not take away the additional profit of the better economic units, and it must not provide exceptional treatment for the economic units that operate less effectively. A domestic price system that is in line with the international competitive prices can stimulate the uncovering of the economy's reserves if our market conditions are in closest possible harmony with the price system that is in force.

This year's price targets are based on foreign-trade price forecasts and on an active exchange-rate policy. Under the new price mechanism, exchange-rate policy has become one of the central regulators of the development of the prices of consumer goods and services. The resolution of the Council of Ministers calls for an exchange-rate policy that enhances the restoration of economic equilibrium and particularly of external economic equilibrium, greater effectiveness of export, improvement of the commodity structure of trade, and relative price stability.

The enterprises must anticipate that exchange-rate policy will remain active. Which means that the commercial exchange rates will decline parallel with the rise of the foreign-market prices. When modifying the exchange rates, of course, an important consideration will be to always provide sufficient incentive for the enterprises to export and to use import economically. But it must be clearly understood that we can protect the Hungarian economy from the harmful effects of inflation on the capitalist markets only by reducing the exchange rate. This in its turn requires that the enterprises which employ competitive pricing (prices in line with the foreign-trade prices) increase their sales prices on export

markets by at least the inflation rate, otherwise the exchange rate's reduction will reduce also their forint proceeds from export, and for this reason they would have to lower also their domestic prices. Thus it is increasingly true that even the maintenance of the existing forint prices and present results requires intensified effort, and that recognized good work must meet the ever-stricter requirements of the foreign markets.

The prices of energy sources will again increase this year. Rising energy prices are a law of the world economy, from which not even we can exempt ourselves. In the productive sphere we will follow the rise in the world-market prices of petroleum and sources of energy. This, of course, places certain requirements also on consumer-price policy, because consumer prices must generally follow the producer prices. However, the impact of energy prices on the population's income is so significant that a rise in energy prices must be reviewed, weighed and analyzed, in the light of the considerations of our policy on the standard of living, and only then can the mode of solution be decided.

Higher world-market prices of energy sources could result in further increases in the prices of certain materials and industrial products. The prices of most industrial basic materials and semifinished products on the world market, however, will foreseeably become stabilized, and the prices of a few raw materials and semifinished products might even decline. The domestic prices will have to follow also these price reductions.

A minimal price rise may occur in the competitive sectors of manufacturing industry. Manufacturing enterprises not only have to keep pace with foreign competitors, but they must also improve their economic work to compensate for the reduction of production-modernization aid. Manufacturing industry's success in this respect is a prerequisite for a consumer-price policy that maintains the already attained standard of living.

The price system of agriculture and the food industry must be developed basically so as to make it better suitable than at present to accept the lasting price changes in the other productive sectors or in import, and at the same time to stimulate more effectively the economical use of resources (particularly of energy and other materials) and the production structure's transformation. Implementation of these requirements will necessitate changes in the procurement prices of the agricultural and industrial materials and capital goods (machinery, chemicals, etc.) used, in the food industry's producer-price system, and even in the producer-price system of foods, but with due consideration for the requirements of the policy on the standard of living.

According to the concept, also in agriculture the price ratios must approximate the pertinent international or foreign-trade price ratios. We must achieve that also the farms and food-industry plants feel more directly the international judgment of their production activity and the changes of this judgment. In the case of products where it is warranted to ensure a producer profitability different from the prices formed in this manner,



it will be expedient to bridge the difference by means of nonprice preferences or, exceptionally, dispreferences.

We are still investigating how adjustment to the foreign-market prices [in agriculture and the food industry] can be realized, and for the time being we have adopted only initial steps. But even until this is worked out, we must ensure that also in these areas we keep abreast of the changes introduced in the price system as a whole. As of 1 January, therefore, the state purchase prices in agriculture and the producer prices in the food industry have generally been adjusted to factor in the increases in the prices of energy and industrial capital goods. Both the level of the purchasing prices in agriculture and the producer price level in the food industry have increased by about 5 percent. But also in these branches the enterprises and cooperatives must absorb through their own efforts a proportion of the higher material costs. In other words, they cannot pass on in their sales prices the entire increase in costs.

The price mechanism, the system for the state regulation of prices, must be developed so that the warranted price changes may be introduced faster than at present, with due consideration for the interests associated with the necessary security of farm production and with faster adjustment to market conditions. This, of course, cannot be accomplished overnight, and it must not cause any interruption in the development of farm production. For the continuous stimulation of development, however, the specific objectives and methods must be formulated already this year.

In the construction industry, too, the objective is to develop a new price system for the coming years. Basically two tasks await solution:

- a. Changes in the socially necessary outlays must be followed continuously, and
- b. The conditions must be created for a price system and price mechanism that provide more-effective incentives for energy conservation, economization with materials, and development of an economical production structure.

These requirements necessitate decisive steps toward creating a construction-industry price system that will end the present restrictions of normative pricing and, with the consolidation of market conditions, will give preference to contract-price agreements. The idea is that the price should not be based on the justifiable costs of the given technology; instead, an agreement on the price, based on the structure's function, should permit "competition" among the individual construction technologies and should offer greater incentives for energy conservation and economization with materials.

In the other branches of the economy--and generally in every area that is not adequately controlled by the foreign-trade prices--price policy must likewise forcefully encourage energy conservation, economization with materials, and the reduction of production costs. Economic discipline cannot

be allowed to become lax in these areas, by automatically passing on the cost increases, because this could spread also to the competitive areas and could jeopardize in their very foundations the realization of our economic policy objectives. In those areas of the noncompetitive sphere where official prices apply, therefore, the pricing authorities will allow the cost increases to be passed on only to a very warranted extent. And in those areas of the noncompetitive sphere where open-market prices apply, the pricing authorities will enforce the principle that profit may be increased only through technical and economic measures of above-average success.

This year we anticipate a rise of approximately 4 percent in the construction industry's price level. Although the rates for construction work will not change, the higher prices of materials, transportation costs, etc. will raise the 1981 level. But in some areas, e.g., in the prices of installation work, there should also be price reductions.

The past year, 1980, was the price concept's touchstone also from the viewpoint of consumer-price policy. An important long-range objective of our economic policy is to make consumer prices value-commensurate. In the next few years, however, we can strive only for preventing a deterioration of the proportionality that has already developed. Value-commensurate consumer prices are the only feasible way of influencing the structure of consumption, without supply restrictions. And it will ensure the most effective utilization of our resources also in foreign trade, because the market allocations freed by a change in the structure of consumption can help us to restore equilibrium in our foreign trade. Value-commensurate consumer prices, then, are an important requirement, but we must judge on the basis of the world-market price ratios whether or not the production costs are socially necessary. At present, therefore, the foreign-trade prices attainable on the world market are the basis of value-commensurate consumer prices in our country. However, we lacked experience in pricing geared to the foreign-trade prices, and it was not possible to foresee with sufficient certainty whether or not the requirement of harmony between prices and personal incomes would compel price policy to accept producer-price compromises that are in conflict with economic sense.

World-market prices rose very sharply in 1980, particularly under the influence of the changes introduced at the end of 1979 and in early 1980. We were able to maintain the pricing principles despite this difficult situation, but the price system's two-tier structure that was established in July 1979 worsened somewhat temporarily. In accordance with the requirements of our policy on the standard of living, the energy prices charged the population, and the prices of basic foodstuffs and essential services (for example, rents and commutation costs) did not change, even though we were unable to ward off completely also in these areas the effects of international inflation. For a wide range of goods and services, however, we were able to enforce value-commensurate prices, and the two-tier structure of our price system was preserved, although not to the desired extent.



The targets of the 1981 plan provide the foundation for a consumer-price policy with which we will maintain the positive two-tier structure of our price system. The plan anticipates that the producer price level of commercially available goods and services will be about 6 percent higher than their producer price level. For the overwhelming majority of the consumer goods and services we will ensure the parallel movement of the producer and consumer prices, but in the case of a few strategically important items (basic foodstuffs and essential services) we will limit the price increases, or we will defer them until the value relations in the subsequent years become known.

Some of the price changes this year will develop in relations between enterprises, while others will result from central measures. More than half of the consumer-price changes will occur in relations between enterprises. (This, incidentally, is in agreement with the fact that about 55 percent of the population's consumption consists of goods and services with open-market prices.) The population has recently been informed about the major proportion of the price changes instituted by central measures, and most of the new prices are already in force.

In price policy, too, the tasks for 1981 will require competence and increased attention. We will have to solve tasks that in many respects are unusual and novel. Despite every effort, many enterprises will probably find themselves in a situation where, on the basis of their 1980 results, they will have to reduce their prices, even though their costs have not declined. Quite a number of enterprises will be unprofitable or in economic hardships. But the way out from the difficulties cannot be solely through price increases. Such a solution is less feasible than ever before. Unjustifiable price increases or the postponement of warranted price reductions would only distort the picture formed of the enterprises' operation and, in the final outcome, would lead to unsound economic decisions, which would only compound our difficulties.

The methods stemming from the new price system's new requirements have generally been developed in trade (more-frequent price changes, inventory control, the marking and announcement of prices, postponement or withholding or minor price changes, etc.). But additional increasing requirements will be placed on trade in 1981. Greater activity will be necessary in price negotiations. Price reductions also must become an integral part of trade's price policy, if the producer prices and other conditions warrant price reductions. Trade will have to implement more consistently the regulations concerning the marking of prices, consumer information, and real price policy in general.

Realization of the 1981 objectives and tasks is the basis of our price audits. Whereas last year the price audits served primarily to familiarize the enterprises with the new price system and to promote its application, emphasis this year has shifted to enforcing the pricing regulations, to checking the formulation of a sound price policy, and to calling violators to account.

**RABA DIRECTOR QUIZZED ON TRACTOR PRODUCTION**

Budapest NEPSZABADSAG in Hungarian 13 Mar 81 p 5

[Interview with Ede Horvath, director general of MVG (Hungarian Railroad Car and Machinery Factory, Győr) by Mihály Tamas: "Raba and Agriculture"]

[Text] The MVG's adventure with manufacturing agricultural machinery did not begin yesterday. In publications treating the enterprise's history we read that after 1915 they were making motorized plows on the basis of a German patent, and in 1930 they began to produce the small Raba tractors. At the end of the decade they switched to a multipurpose model with multi-speed transmission, this was the famous Raba-Mindenes [Raba-With Everything] tractor. Agricultural machinery and implements also appeared later in the factory's history.

Right after World War II, to ease the severe shortages, they made horse cart axles, wheel rims, horseshoes, and hoes, then between 1947 and 1949 they made tractors, carts, grain drills, and several thousand plows, disc cultivators, and scuffle hoes. In the mid-fifties, to help out agriculture in a hurry, the factory made 10,000 horse-drawn plows, over 2,000 harrows, a large number of pruning saws, and 50-liter fodder stewers. There was a longer pause after this. The Raba's production of agricultural machinery picked up again after two decades in 1975, and soon this accounted for 15 percent of the enterprise's income. I asked director general Ede Horvath about the future, about how they will continue.

[Question] Are there plans to increase the 15 percent income ratio, and for vigorous growth of agricultural machinery production during the Sixth Five-Year Plan?

[Answer] Our agricultural machinery production capacity is much larger than that which we are currently using, and the income generated by this is also below our capabilities. In spite of this we are not planning to increase production, because in our judgment profitable demand in the next year or two does not justify it.

[Question] Will selection be expanded?

[Answer] Of course we have not given up on developing and producing new machinery. This year we will buy licenses for four or five extremely modern machines and implements from our American partner, the International Harvester Company (IHC). We will buy the newest plows, and the manufacturing licenses for the model Cyclo 800 corn and sunflower seeders. We will also buy a modern, 180 horsepower tractor, with front and rear wheel drive.

[Question] Is this necessary? What happened to Raba's domestically-developed 180 horsepower tractor, which was ceremoniously introduced to the experts and the press in 1976? Has it gone under?

[Answer] Our 180 horsepower tractor! I will tell you: We wanted to construct an agricultural power machine which was versatile. At that time we thought, but today I can see that we thought incorrectly, that it would be best to join with the agricultural experts, and together design a tractor which would be good from all viewpoints. Indeed, this is what we did. And this is the tragedy of it! Everyone puts his doctoral dissertation into this tractor. It can do everything. It has front and rear-wheel drives, it dispenses manure up front, and plows it under in back at the same time... What else can I tell you? And when it was finished, then those who talked us into building it this way declared that it is no good because it is too complicated.

[Question] Were they not criticizing the manufacturing defects? Even today, at the AGROTROSZT [Agricultural Supply Trust] there are 90 of this model in the warehouse, and according to the salesman the market's value judgment contradicts what has just been said.

[Answer] The first production series did have problems. Its water cooling was less than perfect. But we changed it and corrected it. In our opinion the machine's technological design is in itself good, but it is true that it is not in harmony with the demands of the buyers. This tractor offers several services which the domestic buyers cannot take advantage of.

[Question] Or were they being sold at too high a price?

[Answer] Its price was almost as high as that of the 250 horsepower tractor.

[Question] As long as we are discussing tractors, let me ask you, what do you think of that quite widely spread opinion that Hungarian tractor manufacturing has been ruined. Or let us call it power machine manufacture, if you please. There are no domestic customers for the Raba-Steigers, and their Western exports have fallen through the bottom of a deep well.

[Answer] That the domestic tractor manufacturing is ruined is a lie. Demand has declined. Agriculture has cut back on its investments, and is spending less on machinery. Even so, this year 100 of the large, 250 horsepower tractors have been ordered from us. This is one thing. The other one is: we had never planned to export these to the West, we never said it. What we did say is that

if an opportunity existed, we would sell some. Even if for no other reasons, then because the tractors make up a few percent of imports from capitalist countries. In contrast with this, it is quite high for agricultural implements. But let me show you something!

At the director general's request a model of the 180 HP tractor made by the IHC and selected for purchase was brought in. The nice red, elaborately detailed tractor, the size of a shoebox, is rolling around on the table with its long hood protruding forward.

"This is one of the most modern models in the world today, one of the easiest ones to sell--Ede Horvath continues. --Look at it, how much it resembles the Dutra of the old Red Star Tractor Factory. The price of that tractor was forcefully kept low. It is true that all kinds of subsidies were piled onto it, but even so it was too inexpensive. If only the right price were paid for it! This was the fundamental problem there.

[Question] And the management...

[Answer] I agree with you, management was, too. But I do declare, being fully aware of my responsibilities, that if it were not the Raba making the tractor and the agricultural implements but a smaller, independent factory, it would have gone into bankruptcy a long time ago. The 15 percent sales income is either there, or it is not, the railroad car factory makes up 18 billion. Such a [product] profile can not knock us flat on our backs. But if we were a small factory, and we would have to make our living just on this, we could have closed our gates a long time ago.

[Question] Why?

[Answer] Hungarian agriculture is modern, and deserves recognition with respect to both its output and its organization, even though there are improvements to be made in its expenses. But something was added to this modern agriculture also from the outside, and also by the Raba [enterprise], among others. For the last five or six years our enterprise has been supplying the agricultural operations with high performance tractors, IH [International Harvester] plows, discs, and all these are made of special quality materials, and are excellent units in their own kinds. We offer IH Cyclo 400 seeders for sowing corn, sunflower, and soya, and model IH 6200 sowers for grain. And now we will also be buying the newest machines, the newest generations. According to surveys, so far we have equipped almost one-third of agriculture with such equipment. But the extreme cycles, the fluctuation of orders that we have here are simply intolerable. If we had orders for 400 of something last year, we might be lucky if we had orders for 200 this year. Last year we added agricultural manufacturing to Raba's Mosonmagyaróvár Agricultural Machinery Factory, this year we quickly relocated the production of brake drums, oil and water suction pumps, and V-belt pulleys there, so that the people there would have work. If a large enterprise such as ours did not stand behind the manufacture of agricultural machinery, we would go bankrupt because of this.



[Question] Is it not the reason for the lukewarm demand that your products are being offered at too stiff a price?

[Answer] When I compare our prices with agriculture's wholesale prices, I have to say that our prices are high. But this is not a good basis for making comparisons. We are not given prices on the world market for specialty steels and imported components on the basis of how high the domestic wholesale prices are here in this country.

[Question] You said a while ago that the Raba's agricultural machines are among the world's elite. What do the buyers say about them? Are there any complaints?

[Answer] We cooperate closely with the agricultural operations, and make what they ask for. For example, we have entered into a contract with the Babolna Agricultural Combine, where we guarantee that if they use our machinery systems, their crop yield averages will increase by 2 tons per hectare on 90,000 hectares. Later the Nadudvar people also joined in the agreement. This is an enormous thing. And it will come to fruition this year. I would not say that there are too many complaints about our machines. But there are some. There was one only yesterday. Last year we sold the first model 6200 sowers. The agricultural people say that it is a miracle. It not only sows the seed, but also presses it into the ground with a rubber roller. It covers up the seed, so that the sowing will not freeze. We hurried with production, so that the last machine could be picked up by September. We set up for production in half a year; this is pretty good time, don't you think? Well, we have now received complaints on a few sowers. We will look at them, and if justified, we will correct the defects.

[Question] In March of 1976, when the manufacturing of agricultural machinery was only being tested, you said: Plows cost more per kilogram than do the Raba-MAN engines, and that if it is such a good business, why should you let it get by you? In fact you were surprised that others did not grab for it. Do you still feel today that agricultural machinery production is such a good business?

[Answer] What I said then is true today, too. The specific profit yield of an engine is less than that of a plow. But we make 30,000 engines per year, and only 2,000 to 3,000 pieces of agricultural equipment. There is no volume in the latter. We could export only to agricultures set up to operate similarly to ours, and except for the USA, the land in the capitalist world is cut up into much smaller parcels than here. You know, we are the same way with agricultural machinery production as a big family is with a sick child. We surround it, nurse it, and keep it alive in any possible way. In 5 years we sold high performance machinery and equipment valued at \$160 million to Hungarian agriculture. If I subtract from this the price of materials and parts built into them and purchased for dollars, import savings to the national economy are \$110 million. This is not our profit, this is returned to the national economy budget.

[Question] The Raba is not the only enterprise affected this way by it.

[Answer] I know. That is not the reason I say this. But while we recognize and appreciate the agriculture's very serious work and results, those who indirectly help it would also deserve a little more appreciation. If someone travels through this country, he can see in the spring or in the fall on the fields, he can convince himself that ours is real true large scale operation, and that the fields were worked not by just any kind of machinery. Well, the MEZOGEP TROSZT [Agricultural Machine Supply Trust] also has a role in this, and the Raba has also done and is doing something for it.

8584

CSO: 2500



FEDERAL PUBLIC PROSECUTOR DISCUSSES ECONOMIC CRIMES

Zagreb SEDAM DANA (supplement to VJESNIK) in Serbo-Croatian 28 Feb 81 pp 6-7

[Interview of Federal Public Prosecutor Vuko Goce Gucetic by Ratomir Petkovic]

[Text] The numerous price increases are nothing but profiteering and it is time to bring an end to them. Just because we have not pursued something in the past does not mean that we will not do so in the future, and in some republics that future has already begun.

In the last month or two prices have increased so much that they are seriously threatening the employment standard and broader social goals of economic stabilization. It is true that many products have become more expensive, but there are also numerous examples where current conditions are being used for profiteering. The fact that previous price regulations are no longer in force, and the new ones are not yet effective, has contributed to the process. Such a massive series of price increases has led the inspectors and prosecutors to examine their justness, and this action has motivated the conversation below with federal public prosecutor Dr Vuko Goce Gucetic. Naturally, the first question is related to the possibilities of rolling back unjustified price increases.

[Gucetic] Runaway prices can be rolled back primarily by broad social actions with the aid of repressive agencies. When, however, a certain illegality such as the present one assumes broad dimensions, the possibility of control by repressive agencies is more restricted than in normal times.

[Question] What do you mean by "limited possibilities"?

[Answer] First of all, control agencies must know what is legal and what is not in these matters, because they cannot take over the function of the pricing offices and declare that some price increases are not allowed, while others are allowed.

An Excuse Can Always Be Found

[Question] Does that mean that inspectors and prosecuting offices will sit with their hands folded?

[Answer] Certainly not, but I would first like to explain how we have gotten into the present situation. We suspended the old price control administrative system, without having the new Law on the Bases of the Price System ready for implementation. To be specific, neither the standard acts nor organizational measures have been approved that would permit the new system to function.

[Question] And for that reason organizations are subject to complaints that they are not obeying the law when they determine prices for their products?

[Answer] It is true that they have not obeyed the law. Perhaps with more good will they might have, but labor organizations have the legitimate excuse that they have had no guidance from the Federal Price Office. How can they develop their own criteria when they have no federal ones? Furthermore, there have been no social agreements for certain branches such as metal processing has. That social agreement determines the policy to be followed, not only by the labor organizations, but also by the sociopolitical communities of the opstina, the republic, or other units. There are also other self-management communities involved, such as economic chambers. All of that, however, does not generally exist.

[Question] What is the situation in the individual republics and provinces?

[Answer] Until a few days ago, one of the republics had not passed a regulation on the formation of a price office, while 3 other federal units had not yet established such offices.

[Question] And therefore, it is no wonder that the present difficulties have occurred?

[Answer] Tuesday at the Assembly Price Council meeting, it was said that the transition from one system to another under the most normal circumstances would lead to certain disturbances. We have dropped one system, but have not replaced it with another, and so a vacuum has developed.

#### The Penalty is not Decisive

[Question] But all of that does not justify the present price chaos?

[Answer] Certainly many should not utilize that empty period between two systems for pushing prices up, and they should be prevented from doing so. Those who have raised prices beyond the regulations should be brought back into legal limits.

[Question] What is needed to effectively do this?

[Answer] The basic factor is to discover such violations. The realization that they will eventually be discovered is the greatest warning and preventative against violators. In that the level of the penalty itself is not decisive, for if someone knows that there is only a 10 percent chance of being caught, he is more likely to become involved in forbidden activities. It is another matter, however, when the potential violator realizes that there is a 90 percent possibility of being caught.

[Question] Does that mean that there are not enough inspectors and prosecutors?

[Answer] There are about 1500 prosecutors in the country, and I consider that to be a sufficient number. However, there are not nearly enough inspectors. In some republics as many as one third of the opstinas do not have an inspector.

[Question] Last year there were many instances in which goods were concealed; does that indicate that controls need to be more comprehensive and effective?

[Answer] We have achieved this thanks to the involvement of the Secretariat of Internal Affairs. Inspection services have, however, always been step-children in some opstinas. The most effective action for strengthening the inspection service has come in Slovenia. Elsewhere as well, better administration of these services is being worked for, but progress is slow.

[Question] Do inspection services have a local, opstina nature?

[Answer] That is also a negative side that reduces effectiveness. For several years we have been drawing attention to the fact that the inspection services were reporting more violations by labor organizations that are located in other opstinas. They have determined that in Serbia, from year to year the number of reports against "outside" organizations has grown, while those against local ones have declined.

What is (II)Legal?

[Question] Unjustified price increases are generally treated as economic crimes. Is that a sufficiently effective penalty?

[Answer] Last year we prosecuted about 20,000 people for economic crimes, of whom 1500 were accused of violating price regulations and about 300 for criminal acts. That is a total of 1800, but every citizen knows that there were many more of them. Usually, the largest number of those caught are managers in commerce, not directors of large labor organizations.

[Question] You mean small fry?

[Answer] Our penalty system for economic crimes permits only financial penalties, which are ineffective. We decided and we have legal provisions for support, to prosecute every relatively serious violation of price regulations. The law states, "Anyone who sells goods and performs services at markedly higher prices than those allowed by regulations may be punished with up to 3 years in jail."

[Question] One must, however, know what is legal and what is not. At present that is difficult to discern, isn't it?

[Answer] That sort of position makes our work difficult. At the Price Office, the interpretation is that labor organizations were responsible for approving their own standardizing acts. Since those acts have not been transmitted to the price offices, they interpret this to mean that the increased prices are invalid. Such an interpretation can be made, but I am not sure that it will always be accepted.

## Profiteering

[Question] At the time of this year's price increases, the criteria were obviously mixed up?

[Answer] It is certain that it did occur and that there was a great deal of speculation. Many sought to make high profits. That fact is, however, that for years prices had been held at close rein. There were even frozen prices, and problems were created. Many collectives operated at a loss. There is economic justification for some price increases on certain goods, but that should be stated by the Price Office, and the prosecutors and courts should not need to establish economic justification.

[Question] How will the prosecutors proceed?

[Answer] Our agencies will await the decisions of the price offices. When they say that a price is illegal and if the collective involved does not roll back the price, then we will prosecute.

[Question] Does that mean that the prosecutors, at least where price increases are concerned, will be unemployed until the time when the price offices are empowered to perform all functions?

[Answer] I cannot give a precise answer, but I would not state matters in that way. You know how it is, we are a legal state, and we must uphold the law. Every violation of law harming a labor organization is just as bad as some abstract protection of the society. The basic factor will be for the price office to say that prices are to be returned to the level of January 1. Every one who fails to do so will be guilty of a criminal act.

[Question] Do you expect much work?

[Answer] That depends on the reports. We are obliged to react as soon as we get the word.

## Obey The Law

[Question] There will be such "words," judging from present reactions to the most recent price increases.

[Answer] We reacted immediately, for example, to the price increases for international transportation, but I have heard that those have already corrected themselves. The prosecutor is obliged to gather information. Frequently such steps have a preventive effect.

[Question] So far we have talked about manifestations that have arisen as a result of the existence of a legal vacuum. Will so-called objective difficulties be honored? What is the responsibility of the prosecutor: to act in accordance with the law, or to weigh objective difficulties as well?



[Answer] The prosecutor wears two hats. He is first of all an agent of criminal prosecution, and he must obey the law. He is, however, also a man who must think politically. He has a preventive function to bring warnings about all deviations that affect social relationships. He must perceive them and warn about them. It is bad when he mixes these two functions, and as an agent of criminal prosecution, he starts to think like a sociopolitical worker. This has already often happened, for many labor organizations have been led into a difficult position through no fault of their own. In those cases the prosecutor has to deal with the question as to whether he should act in strict accordance with the law, or take objective difficulties into consideration. So far the prosecutor has not frequently opted for the latter.

[Question] And from now on?

[Answer] And from now on we are no longer to consider that?

#### Some Time the Chain Must Break

[Question] Does that mean that you will no longer tolerate the resale of foreign currency?

[Answer] That began to appear 2 years ago. Those labor organizations that purchase foreign currency explain that they must buy it, for otherwise their production would stop. You cannot, however, prosecute just one of them, for both the one practice and the other are banned. On the other hand, the sellers of foreign currency explain that they obtained that foreign money by hard labor and often with losses. Nevertheless, I think that selling foreign currency on the black market is extremely amoral. Before devaluation, the dollar was worth 100 percent more than the official rate, and now it still is worth as much as 40 percent more.

[Question] On what do you base your determination about the amorality of currency selling, since exporters state that it is hard to choose exports for world markets?

[Answer] The exporters have a certain amount of support. Therefore, they have not become involved in the price competition. It would be hard to find a place in the market if we sold according to the principle of cost. A part of that is paid by the entire community. He who exports has not attained that status exclusively by his own work and his own sweat, but thanks also to the support of the society. Thus it is extremely amoral to sell foreign currency gained in that way for markedly higher prices. As soon as foreign currency is more expensive, the finished product costs more, for the one who bought hard currency on the black market must figure that cost into his price.

[Question] What did you decide?

[Answer] We decided to criminally prosecute all those who participate in the resale of foreign currency at higher prices.

[Question] Is that a new wind blowing?



[Answer] The fact that we did not prosecute something yesterday does not mean that we will operate the same way tomorrow. We have to break the chain once and for all. In some republics, the message has already been passed that "starting Monday" you cannot do things in the old way. Therefore, every one will see his own "Monday" arrive.

12131

CSO: 2800

'GROUP OWNERSHIP' TENDENCIES TERMED DANGEROUS

Belgrade BORBA in Serbo-Croatian 10 Feb 8: p 2

[Article by J. Pjevic: "Criticisms Are Not Enough"]

[Text] Recently, the destructive effect of group-ownership management and handling of publicly owned production funds and income (also publicly owned) to establish self-managed socialized labor as set forth in the Constitution and the Law on Associated Labor and on the very operation of an organization of associated labor is being talked about and written about more and more frequently and emphatically.

Without doubt, the warnings in their place are also necessary. However, the trouble is that most often, they remain on the level of verbal warnings and criticisms, and insufficient attention is devoted to the investigation and disclosure of the causes (objective and subjective) that make such behavior possible. The problem also lies in the opportunistic attitude of communists and other subjective factors toward the concrete manifestations of group ownership operations in their organizations and communities. Moreover, at times, individual communists are found among the perpetrators of such management, or because of some transitory narrow parochial interests, such very harmful and dangerous anti-self-management and anti-socialist management and operation of publicly owned assets is tolerated (and by doing so is in effect, tacitly supported) by them.

Two examples

Two examples of Ptuj and Dravograd can attest to the variety of causes and manifestations of group-ownership management and the opportunistic attitude of communists and others toward such occurrences. Until the end of last year, in the Dravograd "Avtoprevoz" Work Organization without a BOAL [Basic Organization of Associated Labor] (with 165 employees, of which 20 are LC members), regulations on compensation were used according to which the wages of the employees depended only on the factoring of money realized, and not on their individual work and labor contribution. The wages were uniformly set on the basis of a predetermined percentage share of the total revenue of the work organization.

This kind of "compensation" provoked constant conflicts among the personnel and led to a shattering of the unity of the personnel and the domination of group interests and individual egoism. Years passed this way until after nearly 10 years of use of this kind of "stock share" distribution system in this work organization, the opstina leadership of the social-political organization became

concerned with "this case," and undertook to develop, implement, and apply the self-managed socialist system of compensation. With great tribulation, the new system was inaugurated, but the effects of the "stock share" system are still strongly felt.

Several years ago, to "conform" to the regulations of the Law on Associated Labor, the Ptuj "Les" Industrial-Trade Enterprise with about 60 employees "was included" into the Celje "Savinje" Wood Processing Industrial Combine with the status of a BOAL. Soon, this new BOAL, because of poor management, began to operate at a loss, and the self-management organs of "Savinje" proposed that it be liquidated. But even before the decision on insolvency took effect, the personnel of "Les" withdrew from the "Savinje," structure to joining Maribor "Marles." To wit, at the insistence and request of the Ptuj opstina leadership, "Marles" agreed to "accept" the Ptuj "Les" and to secure 15 million dinars in credit for debt repayment and to make it a profitable operation.

"Marles" secured the 15 million dinars it had proposed and announced a referendum on including "Les" in its organization with the status of a BOAL. However, because of worker disagreement in one BOAL, the referendum provided an adverse answer. According to the law a new referendum could be held only after 6 months. During the course of those 6 months, "Les" spent the funds obtained based on orders from the director and without any kind of decision by self-management organs. At the new referendum, the workers voted against joining "Marles," whereas the workers of all the "Marles" BOAL's voted for it."

To avoid returning the funds to "Marles," demanded after this unsuccessful referendum, another referendum was organized overnight at "LES." They decided to again "join the Celje "Savinje" figuring, perhaps, that the other BOAL's of this work organization would pay off its debt.

#### How to Put Them Out of Business

Responsible socio-political, self-management, and social organs have not yet considered it necessary to have a showdown with this playing around and manipulation, in which many communists also participate. This, unfortunately, does not involve just isolated cases. Privatization and usurpation of public property in similar or different variants also manifests itself in other circles.

This very dangerous phenomenon, of course, cannot be completely uprooted overnight, but with the development of true socialist self-management and by raising the consciousness to the importance of public property, it can be stopped from spreading, and then completely eliminated from our society. What is most worrisome is not so much this destructive phenomenon in itself, but the opportunistic and tolerant attitude of individual communists, organizations, and leaders of socio-political and public organs with respect to the perpetrators and abettors.

## AGREEMENT ON PRODUCING SOLAR ENERGY EQUIPMENT

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 27 Feb 81 p 8

[Text] Those responsible for the development of programmed technological systems to use solar energy can quickly enter domestic and foreign markets.

At the end of last year, about 30 collectives that produce solar energy equipment signed a self-management contract for cooperation, division of labor, specialization and coordination of research programs.

A special addendum to this contract stipulated which firms were responsible for the development of programmatic and technological systems, and for essential components and sub-assemblies. Among them are the Crvena Zastava firm of Kragujevac, Gosa of Smederevska Palanka, the Frigostroji industry for cooling and air-conditioning equipment, the refrigeration factory Jugostroj, Janko Kisić, Mihailo Pupin, Minel boiler manufacturers, Duga, a paint and lacquer plant, and the MAG machinebuilding plant, all in Belgrade. Also involved are the Utva aircraft plant, the HIP chemical and glass plants of Pancevo, the Electrical Industry Nis plant, Viskoza of Loznica, Elind of Valjevo, the Teleoptik factory for precision instruments, equipment and automatic devices of Zemun, the Magnohron plant of Valjevo, the Luznica Chemical Plant of Babusnica, the Cer plant at Čačak, the aluminum and copper rolling plant "Slobodan Penzić" of Krcun, Sevojno, and others.

The self-management contract obliges those responsible for development to satisfy the following criteria for using solar energy in programmatic and technological complete systems: They must be established as producers of this equipment, they must have the necessary personnel and corresponding developmental services, and they must readily be able to enter domestic and foreign markets. Division of labor, specialization and cooperation shall be utilized to avoid duplication of production facilities so, where possible, they can begin expanding existing plants and building new facilities, with the stipulation that at least 80 percent of capacity must be used. Also, in introducing new programs involving high levels of processing, previously performed in cooperative arrangements with foreign partners, signatories must give priority to those other signers of the contract that have already become established on domestic and foreign markets, and for products with lower levels of manufacturing processing, they must turn

to those partners that are just beginning to produce equipment for solar energy applications.

In addition to providing continuing production of solar energy equipment utilizing the most modern technical and technological achievements, participants in the contract are obliged in final products to install parts and components made by cooperating producers before turning to other suppliers. Concerning the division of labor, there is also the significant obligation that no participant may begin production of new products (that were not in its production program on the day the agreement was signed), without previous consultation and agreement with the signatories of this contract.

This document may be signed subsequently only by labor organizations that produce solar energy equipment which coordinate their programs and development plans with the other signatories of the contract.

A meeting of the Coordinating Council of signers of this contract will be held in a matter of days in the Yugoslav Economic Chamber, at which time they will approve development programs, priority projects, and research aims in the field of solar energy utilization.

12131

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## SLOVENES CONTRIBUTE TO CAPITAL INVESTMENT IN MONTENEGRO

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 12 Mar 81 p 1

[Text] Construction of several projects in agriculture, the tourist industry and the metal manufacturing industry in Montenegro will begin during this very year with joint financing by the economy of Montenegro and Slovenia. Thus Sinjavina of Savnik and Emona of Celje will build a cattle farm for raising breeding animals and for fattening young beef, and Slovin of Ljubljana and the 13 Juli Agricultural Combine of Titograd will invest jointly to improve and expand the production of wine as a subsidiary operation within the agricultural combine in Titograd.

Capital from the Slovenian economy will be involved in financing construction of a hotel, most probably at Ulcinj, which will have between 400 and 500 beds, and construction of a mountain tourist center at Rozaj, and a project to build a facility for production of aluminum fabrications and toilet and bathtub enclosures in one of the most underdeveloped opstinas in Montenegro. Most of these projects will go under construction during this year.

This is a summary of the agreements reached in Titograd between economic delegations of Slovenia and Montenegro which were headed by Janez Zemljarić and Momcilo Cemović, chairmen of the executive councils of the two respective republics, and Andrej Verbić and Omer Kurpejović, presidents of the respective republic economic chambers.

The basis for a specific agreement on construction of several industrial projects in Montenegro on the basis of joint investments by the economy of the two republics is to be 50 percent of the funds which Slovenia pays into the Fund for Stimulation of the Accelerated Development of the Underdeveloped Republics and Provinces. According to certain estimates Montenegro's share for the 1981-1985 period on the basis of 50 percent of the contributions from Slovenia would be about 1.3 billion dinars. The Montenegrin delegation offered several projects in this context which in this period could be built by joint investment, and those which are of common interest to the economies of the two republics have for the present been selected in this agreement.

During the talks mutual willingness was expressed for further expansion of cooperation even outside the resources of the fund, which are assessed and committed to joint ventures by law. This cooperation is especially possible and desirable among

the steel mill in Niksic, the aluminum combine in Titograd, the Obod Electrical Products Industry of Cetinje, the Radoje Dakic Construction Machines Industry of Titograd, the Javorak SIK (Timber, Lumber and Wood Manufacturing Combine) of Niksic and certain others with corresponding and related OUR's [organization of associated labor] in Slovenia. Further talks on specific forms of expanded cooperation between these and other OUR's of the two republics will be conducted through the economic chambers and interested work organizations, specific stipulation being made that the basis for cooperation shall also be explored in the sectors of maritime shipping, construction, small business and other activities.

7045

CSO: 2800

## CROATIAN AID TO UNDERDEVELOPED REPUBLICS, KOSOVO

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 11 Mar 81 p 1

[Text] The Economic Chamber of Croatia and general associations have together with OUR's (organization of associated labor) of Croatia undertaken a part of the job of working out projects and coordination with the underdeveloped republics and SAP [Socialist Autonomous Province] Kosovo in order to ascertain joint interest in carrying out particular programs. It is now indispensable for a capital-pooling arrangement to be agreed on, for those who will carry out the projects in particular activities to be designated, and for a maximum number of work organizations who can do so to commit themselves to development of a particular production operation in some underdeveloped republic or Kosovo. This was stated in the meeting of the Standing Committee for Interrepublic Economic Cooperation of the Economic Chamber of Croatia.

This committee adopted an operative program for the activity of the chamber system in implementing the agreement on the bases of the Yugoslav social plan on policy for accelerated development of the economically underdeveloped republics and SAP Kosovo from 1981 to 1985. The reference is to large resources which OUR's in SR [Socialist Republic] Croatia will contribute to joint investment in this period. These resources will total about 19.5 billion dinars: 5.4 billion for SR Bosnia-Herzegovina, 1.9 for Montenegro, 3.8 for Macedonia and 8.2 billion dinars for Kosovo.

Every year 4 billion dinars will be furnished for these programs in Croatia, and since the funds involved are large, it is indispensable that the development projects be based on income sharing, which will be conducive to larger income and corresponding employment. These programs will yield not only sizable benefits in development of the underdeveloped republics and the Province of Kosovo, but also a better quality of linkage between the economies of advanced and underdeveloped parts of the country and more optimum and improved linkage throughout the entire economy. That is why the committee emphasized the need for the pooling of capital to begin with attractive projects acceptable to both sides.

The organizations interested at present in making investments to accelerate the development of Montenegro are Rade Koncar, RIZ [Radio Industry of Zagreb], Petrokem, INA-Plin [Gas Subsidiary of Zagreb Petroleum Industry]; those interested in Bosnia-Herzegovina are Jugoturbina, Podravka, Elka, Borovo, and Rudar; those interested in

Kosovo are Djuro Djakovic, TPK [Steam Boiler Factory of Zagreb], Jugokeramika, Vijadukt, Tekstil, and certain other work organizations. The first talks have already been held among the chambers of Croatia, Montenegro and Bosnia-Herzegovina, during which areas were examined in which the Croatian economy might become involved. Business executives of Montenegro have presented development programs in the metal manufacturing and chemical industries, timbering and food production, emphasizing the need for more rapid development of underdeveloped opstinas through joint investment in realistic programs, and representatives of Bosnia-Herzegovina have shown an interest in investment to develop certain manufacturing capacities. Croatia is especially interested in making investments in raw materials, energy, intermediate products and petroleum and gas exploration.

7045

CSO: 2800

**PLANS FOR EMPLOYMENT GROWTH IN SLOVENIA**

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 11 Mar 81 p 8

[Article by Ljubomir Krasojevic: "Sights Set on More Optimum Growth of Employment"]

[Text] Last year Slovenia recorded the lowest growth of employment not only in the last medium-term period, but even over a considerably longer period of time. According to the most recent figures of the republic bureau for statistics, at the end of last year a total of 776,357 workers were employed in the associated labor of that republic, which is 6,254, or 0.8 percent, more than at the end of 1979. In past years the average growth of employment in this republic has been between 20,000 and 30,000 workers per year. Under the impact of the extensive and very systematic measures to stabilize economic flows, everything indicates that hiring for extensive expansion has come to an end in this republic. Thus, it is said here, a significant qualitative improvement has been achieved in the conduct of economic activity under the conditions of lasting implementation of the stabilization measures.

Counting the 21,000 workers in the private sector as well, 42 percent of Slovenia's entire population is employed, which is regarded as a satisfactory level.

But however satisfactory the results of employment in the last year of the past medium-term period are seen to be on the whole with respect to efficiency, this cannot be said of certain regions or certain sections of associated labor. It is nevertheless significant that the results in this respect have been most successful in the economy, which at the end of last year had a work force of 657,154, that is, 0.7 percent more than a year previously. As we see, the growth of employment in the economy last year was 0.10 percent lower than the average growth of employment in Slovenia.

However, the rate of growth of employment has varied from sector to sector of the economy. In view of the augmented needs for raw materials and capital goods from domestic sources, the growth of employment was considerably higher than the republic average in certain heavy industries (nonmetallic mineral production, nonferrous metallurgy, machinebuilding, shipbuilding ...).



### **In the Noneconomic Sector--Nothing New**

In several industries (electric power industry, chemical industry, wood industry, a major portion of the textile industry, the leather and footwear industry, and certain other manufacturing industries) employment at the end of last year was below the level at the end of December 1979. This trend of employment in manufacturing industries to optimize their hiring in order to stimulate a rise of labor productivity and reduction of production costs is also the most essential factor in stabilization.

However, it is quite certain now, and this is indicated altogether clearly by the most recent statistical data, that the attitude toward effective hiring has not spread to the noneconomic sector. That is, at the end of last year it employed 119,800 workers in Slovenia. This constitutes a growth of 1.6 percent over the same time of the previous year, 1979, which is twice the growth rate of the economy (the growth rate of employment in the economy was 0.7 percent last year). Contrary to expectations employment in the field of education and culture rose 1.8 percent last year in Slovenia, in health and social welfare it was 1.4 percent, and in public organizations and communities it was 1.5 percent over a year earlier. Though so far no official comment has been made as to the cause of the relatively high level of employment growth in certain noneconomic sectors of Slovenia, it is indisputable that these trends lead to the conclusion that more consistency is needed in implementing the stabilization measures.

There are many signs that the slower growth rate of employment in Slovenia has had a considerable impact on the growth of unemployment in the republic; at the end of last year there were 12,227 unemployed, which is 18 percent more than a year previously. Most of the unemployed in the republic are workers with secondary and junior and senior postsecondary schooling, which indubitably indicates that educational programs are not sufficiently aligned to the needs of associated labor.

### **Larger Obligations**

In the context of Slovenia's overall projected development in the context of stabilization, particular importance is being paid this year and over the next 5 years to more optimum growth of employment. In the republic's leading economic sector--industry, the total growth of employment in the coming medium-term period is projected at 1.6 percent, which is 0.4 percent slower than the overall growth. Only in tertiary activities will it be possible for the growth of employment to exceed the republic average according to the projection.

In 1981, the first year of the new medium-term plan, the growth rate of employment in Slovenia would be still more modest. As projected by the republic's development program, employment this year would be limited to a growth rate of 1.2 percent; moreover, the growth of productivity is supposed to contribute half of the growth of the social product. In certain social service activities (education, health care and child care) the growth of employment will be 1.6 percent this year, and the reason is that a number of facilities just built will be opened in these activities.

In past years the problem of a manpower shortage has been manifested in Slovenia, and therefore a third of the needs for manpower have been met from the other parts of the country, amounting to approximately 10,000 to 15,000 workers annually. It is now quite certain, and this has also been pointed out in the competent agencies of the republic, that this year and in coming years the inflow of manpower from the other regions of the country will be considerably slower. Aside from the turn toward more productive growth of employment, this will also be the result of implementation of the Social Compact on Minimum Living and Working Conditions of Workers, which commits work organizations to provide adequate conditions when they open up a new job. Self-management accords on achieving these goals were signed before the end of last year by 54 Slovenian opstinas, and 7 opstinas with a lower level of employment still have not signed this self-management document.

In spite of the obligation which the agreement places on work organizations, the demands of workers from other regions of our country are becoming broader, especially concerning minimum living conditions. Meeting obligations of this kind also requires, of course, a corresponding growth of income. Though difficulties of a material nature are being encountered in this effort, the realization of those conditions will continue to be insisted on. In this connection an agreement has been made that in future no capital investment program will be accepted which does not contain investments to ensure the living and working conditions of the workers.

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## GROWTH RATE OF INVESTMENT IN FIXED CAPITAL SLOWS

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[Text] The tendency toward a slower growth of capital investment which began last year has continued at the beginning of 1981 as well. Investments in fixed capital increased 25 percent in nominal terms in January over the same month of last year. However, when this rate is adjusted for the higher prices of building materials and equipment and for the rise of personal incomes in construction and the crafts and trades, it can be concluded that capital investments have dropped somewhat in real terms.

As to the sources of capital investments, the largest investments are still being made from bank sources, whose share increased from 48.2 percent in January 1980 to 51.2 percent in the same month of this year. Housing construction has an important place among projects financed with bank funds, since credit issued for this purpose reached 4,168 million dinars in January, which is 32 percent more than in the same month of last year. In view of the resources available, it is assumed that the credit financing of housing construction will be still more intensive in coming months.

Investments made by organizations of associated labor in the economy from their business fund and from other sources increased in January at a considerably lower rate than those from other sources, and as a result the economy's share in total investments dropped from 32.3 to 30.6 percent, while the share of other sectors increased correspondingly.

In the breakdown by republics and provinces investments in January increased as follows over the same month of last year: 26 percent in Bosnia-Hercegovina, 60 percent in Montenegro, 20 percent in Croatia, 61 percent in Macedonia, 33 percent in Slovenia and 16 percent in Serbia. Within Serbia the growth was 21 percent in Serbia proper and 6 percent in Kosovo and in Vojvodina. The differing growth rates are in large part the result of an uneven rate of payment for work completed at the end of last year, and they will undergo essential adjustment when all payments are made.

The trends at the beginning of the year are in line with the goals of economic policy in this sector of spending, since the Resolution on Basic Guidelines and Limits of the Policy of Socioeconomic Development in 1981 foresaw a real level in investment in fixed capital lower than in 1980, which would diminish the share of this

investment in the social product considerably. Moreover, the volume of nonproduction and noneconomic investments, except for investments in housing construction, are to drop 30 percent in total investments in fixed capital.

Investments in Fixed Capital, in millions of dinars

	<u>Jan 80</u>	<u>Jan 81</u>	<u>Jan 81</u> <u>Jan 80</u>	<u>Distribution, %</u>	
				<u>Jan 80</u>	<u>Jan 81</u>
Total investments	33,016	41,418	125	100.0	100.0
OUR's [organization of associated labor] in the economy	10,667	12,707	119	32.3	30.6
OUR's outside the economy	3,538	3,756	106	10.7	9.1
Self-managed communities of interest	1,281	1,278	100	3.9	3.1
Banks	15,917	21,226	133	48.2	51.2
Loans made through banks	1,110	1,976	178	3.4	4.8
Sociopolitical communities	503	475	94	1.5	1.2
Breakdown:					
Opstinas	201	210	110	0.6	0.5
Republics and provinces	200	239	120	0.6	0.6
Federation	102	26	25	0.3	0.1

It has accordingly been envisaged that organizations of associated labor, self-managed communities of interest and banks will by the end of the first quarter reassess decisions already made, ascertain possible overruns and take measures to bring investments into line with resources actually available. In addition, investors and banks are required by the end of March to halt or delay construction of projects already begun if they are not important to changing the material structure of the economy or to increasing exports and import substitution.

In order to ensure the conditions for improvement of the structure of production, it has been envisaged that republics and autonomous provinces shall through their own measures bring pressure to bear on investors and banks to commit their capital and mount efforts for faster completion of projects under construction which are important to increasing exports, to import substitution, and to production of raw materials and food, as well as projects in the fuel and power industry. Other support to this orientation will come from the channeling of more foreign credit into investments in priority projects and purposes.

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